

APPLICANT(S): WIIITT, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 4

#### AMENDMENTS TO THE CLAIMS

Please amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1. (Currently amended) A recombinant non-cytopathic Rhabdovirus comprising a nucleic acid ~~of~~ encoding a Rhabdoviral genome wherein said Rhabdoviral genome comprises a deletion or a mutation within a region encoding a matrix (M) protein—(M), wherein said M protein deletion or mutation results in a non-cytopathic Rhabdovirus.
2. (Currently amended) The recombinant non-cytopathic Rhabdovirus of claim 1, further comprising a deletion or a mutation within a region encoding a glycoprotein (G protein).
3. (Original) The recombinant non-cytopathic Rhabdovirus of claim 1, further comprising a regulatory element.
4. (Currently amended) The recombinant non-cytopathic Rhabdovirus of claim 1, wherein said deletion or mutation is in a region encoding the N-terminal half portion of said matrix protein.
5. (Currently amended) The recombinant non-cytopathic Rhabdovirus of claim 4, wherein said deletion or mutation is in the region encoding the N-terminal part of said matrix protein encoding a nuclear localization sequence (NLS).
6. (Currently amended) The recombinant non-cytopathic Rhabdovirus of claim 5, wherein said mutation encodes for the substitution of:

APPLICANT(S): WIITT, Michael A. *et al.*

SERIAL NO.: 10/656,894

FILED: September 8, 2003

Page 5

(a) An alanine amino acid residue for a methionine amino acid residue, at position 33 or 51 of the Rhabdovirus matrix protein; or

(b) A serine amino acid residue for a glycine amino acid residue, at position 226 of the Rhabdovirus matrix protein.

7. (Currently amended) The recombinant non-cytopathic Rhabdovirus of claim 1, further comprising an insertion of a heterologous nucleic acid encoding a second polypeptide.

8. (Currently amended) The recombinant non-cytopathic Rhabdovirus of claim 7, wherein said second polypeptide is a therapeutic polypeptide.

9. (Withdrawn and currently amended) The recombinant non-cytopathic Rhabdovirus of claim 7, wherein said second polypeptide is immunogenic.

10. (Withdrawn and currently amended) The recombinant non-cytopathic Rhabdovirus of claim 1, further comprising an insertion of a heterologous nucleic acid encoding a marker polypeptide.

11. (Withdrawn) The recombinant non-cytopathic Rhabdovirus of claim 10, wherein said marker polypeptide is green fluorescent protein (GFP), secreted alkaline phosphatase, DS-Rcd fluorescent protein, beta-galactosidase, or luciferase.

12. (Withdrawn) The recombinant non-cytopathic Rhabdovirus of claim 1, further comprising an insertion of a heterologous nucleic acid encoding a suicide gene.

APPLICANT(S): WHITT, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 6

- 13.(Withdrawn) The recombinant non-cytopathic Rhabdovirus of claim 1, further comprising an insertion of a heterologous nucleic acid encoding a cytokine gene.
- 14.(Withdrawn) The recombinant non-cytopathic Rhabdovirus of claim 13, wherein said cytokine is interleukin 2, interleukin 4, interleukin 12 or interferon- $\gamma$ .
- 15.(Original) The recombinant non-cytopathic Rhabdovirus of claim 1, further comprising a Rhabdovirus G stem polypeptide.
- 16.(Currently amended) A vaccine comprising the The recombinant non-cytopathic Rhabdovirus of claim 1, wherein said recombinant non-cytopathic Rhabdovirus is being used as a gene delivery vector or a vaccine.
- 17.(Cancelled)
- 18.(Currently amended) The recombinant non-cytopathic Rhabdovirus of claim 1, wherein said Rhabdovirus Rhabdoviral genome is a vesicular stomatitis virus (VSV) genome.
- 19.(Withdrawn and currently amended) A method of producing a non-cytopathic recombinant Rhabdovirus comprising a genetically modified nucleic acid encoding Rhabdovirus proteins including a deletion or a mutation within a matrix protein ( $M$ )-comprising the steps of: (A) inserting into a suitable cell a polynucleotide sequence encoding Rhabdovirus proteins including a deletion or a mutation within the matrix protein ( $M$ ), a polynucleotide sequence encoding a marker polypeptide and a polycistronic cDNA comprising at least

APPLICANT(S): WITTI, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 7

the 3' and 5' Rhabdovirus leader and trailer regions containing the cis acting signals for Rhabdovirus replication; (B) culturing the cell under conditions that select for a noncytopathic phenotype of said cell; (C) culturing said cell under conditions that permit production of the recombinant Rhabdovirus, and (D) isolating said non cytopathic recombinant Rhabdovirus.

20. (Withdrawn and currently amended) The method of claim 19, wherein said non-cytopathic recombinant Rhabdovirus further comprises a heterologous nucleic acid sequence encoding a second polypeptide.
21. (Withdrawn and currently amended) The method of claim 20, wherein said second polypeptide is a therapeutic polypeptide.
22. (Withdrawn and currently amended) The method of claim 21, wherein said second polypeptide is immunogenic.
23. (Withdrawn) The method of claim 19, further comprising the step of isolating genomic RNA from said isolated non-cytopathic recombinant Rhabdovirus.
24. (Withdrawn) The method of claim 23, wherein said step of isolating genomic RNA is performed by using RT-PCR.
25. (Withdrawn) The method of claim 19, wherein said suitable cell, being selected from the group consisting of rodent, primate and human cells.
26. (Withdrawn and currently amended) The method of claim 19, wherein said deletion or mutation resides in a region encoding the N-terminal region portion of said matrix protein.

APPLICANT(S): WHITT, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 8

- 27.(Withdrawn and currently amended) The method of claim 26, wherein said deletion or mutation is in the region encoding residing in said N terminal region of said matrix protein is part of a nuclear localization sequence (NLS).
- 28.(Withdrawn and Previously Presented) The method of claim 19, wherein said mutation is an amino acid substitution of:
- (a) An alanine amino acid residue for a methionine amino acid residue, at position 33 or 51; or
  - (b) A serine amino acid residue for a glycine amino acid residue, at position 226.
- 29.(Withdrawn) The method of claim 19, wherein the non-cytopathic recombinant Rhabdovirus is a vesicular stomatitis virus (VSV).
- 30.(Currently amended) An isolated nucleic acid molecule comprising a polynucleotide sequence encoding a genome of a non-cytopathic Rhabdovirus, said polynucleotide sequence having a deletion or a mutation in a gene encoding a matrix (M) protein (M), wherein said M protein deletion or mutation results in a non-cytopathic Rhabdovirus.
- 31.(Currently amended) The isolated nucleic acid molecule of claim 30, wherein said Rhabdoviral genome of a non-cytopathic Rhabdovirus further comprises a deletion or a mutation within the region encoding a genetically modified glycoprotein (G protein).
- 32.(Original) The isolated nucleic acid molecule of claim 30, further comprising a regulatory element.

APPLICANT(S): WHITT, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 9

33. (Currently amended) The isolated nucleic acid molecule of claim 30, wherein said deletion or mutation is residues in a the region encoding an the N-terminal region portion of said matrix protein.
34. (Currently amended) The isolated nucleic acid molecule of claim 33, wherein said deletion or mutation residues in the region encoding an N-terminal region of said matrix protein encoding a nuclear localization sequence (NLS).
35. (Currently amended) The isolated nucleic acid molecule of claim 30, wherein said mutation encodes for the substitution of:
- (a) An alanine amino acid residue for a methionine amino acid residue, at position 33 or 51 of the Rhabdovirus matrix protein; or
- (b) A serine amino acid residue for a glycine amino acid residue, at position 226 of the Rhabdovirus matrix protein.
36. (Currently amended) The isolated nucleic acid molecule of claim 30, further comprising an insertion of a heterologous nucleic acid sequence encoding a second polypeptide.
37. (Currently amended) The isolated nucleic acid molecule of claim 36, wherein said second polypeptide is a therapeutic polypeptide.
38. (Withdrawn and currently amended) The isolated nucleic acid molecule of claim 36, wherein said second polypeptide is immunogenic.
39. (Withdrawn) The isolated nucleic acid molecule of claim 30, further comprising an insertion of a heterologous nucleic acid sequence encoding a marker polypeptide.

APPLICANT(S): WILITI, Michael A. *et al.*

SERIAL NO.: 10/656,894

FILED: September 8, 2003

Page 10

40. (Withdrawn) The isolated nucleic acid molecule of claim 39, wherein said marker polypeptide is green fluorescent protein, secreted alkaline phosphatase, DS-Red fluorescent protein, beta-galactosidase, or luciferase.

41. (Withdrawn) The isolated nucleic acid molecule of claim 30, further comprising an insertion of a nucleic acid sequence encoding a suicide gene.

42. (Currently amended) The isolated nucleic acid molecule of claim 30, further comprising an insertion of a nucleic acid sequence encoding a Rhabdovirus G stem polypeptide.

43. (Currently amended) The isolated nucleic acid molecule of claim 30, wherein said Rhabdoviral genome is a vesicular stomatitis virus (VSV) genome.

44. (Original) A vector comprising the isolated nucleic acid molecule of claim 30.

45. (Currently amended) A recombinant Rhabdovirus comprising a nucleic acid of encoding a Rhabdoviral genome wherein said Rhabdoviral genome comprises a deletion or a mutation within a region encoding a the membrane-proximal ectodomain of a Rhabdoviral glycoprotein (G protein).

46. (Withdrawn) The recombinant Rhabdovirus of claim 45, wherein said mutation encodes for the substitution of:

- (i) An alanine amino acid residue for a tryptophan amino acid residue;
- (ii) An alanine amino acid residue for a glutamic acid, glycine and/or phenylalanine amino acid residue; or

APPLICANT(S): WHITT, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 11

- (iii) Aspartic acid and alanine amino acid residues for a glutamic acid, glycine or phenylalanine amino acid residue, or combinations thereof; or
- (iv) Any combination of the substitutions in (a)-(c).

47. (Currently amended) The recombinant Rhabdovirus of claim 45, wherein said mutation ~~encompasses for the deletion of deletion comprises:~~

- (a) nucleotides encoding for the amino acid residues 449-461 of the membrane-proximal ectodomain of the Rhabdoviral glycoprotein, or a fragment thereof; or
- (b) nucleotides encoding for the amino acid residues 440-449 of the membrane-proximal ectodomain of the Rhabdoviral glycoprotein, or a fragment thereof.

48. (Withdrawn) The recombinant Rhabdovirus of 45, wherein said mutation is an insertion of the nucleotides encoding for the amino acid residues 311-319 of decay acceleration factor (DAF), inserted between serine amino acid residues of the Rhabdoviral glycoprotein membrane proximal ectodomain.

49. (Currently amended) The recombinant Rhabdovirus of claim 45, further comprising an insertion of a heterologous nucleic acid sequence encoding a ~~second~~ polypeptide.

50. (Currently amended) The recombinant Rhabdovirus of claim 49, wherein said ~~second~~ polypeptide is a therapeutic polypeptide.

APPLICANT(S): WHITT, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 12

51. (Withdrawn and currently amended) The recombinant Rhabdovirus of claim 49, wherein said second polypeptide is immunogenic.
52. (Withdrawn) The recombinant Rhabdovirus of 45, further comprising an insertion of a heterologous nucleic acid sequence encoding a marker polypeptide.
53. (Withdrawn) The recombinant Rhabdovirus of claim 52, wherein said marker polypeptide is green fluorescent protein (GFP), secreted alkaline phosphatase, DS-Red fluorescent protein, beta-galactosidase, or luciferase.
54. (Withdrawn) The recombinant Rhabdovirus of claim 45, further comprising an insertion of a heterologous nucleic acid sequence encoding a suicide gene.
55. (Withdrawn) The recombinant Rhabdovirus of claim 45, further comprising an insertion of a heterologous nucleic acid sequence encoding a cytokine gene.
56. (Withdrawn) The recombinant Rhabdovirus of claim 55, wherein said cytokine is interleukin 2, interleukin 4, interleukin 12 or interferon- $\gamma$ .
57. (Currently amended) The recombinant Rhabdovirus of claim 45, further comprising a deletion or a mutation within the region encoding a matrix (M) protein-(M).
58. (Currently amended) The recombinant Rhabdovirus of claim 57, wherein said deletion or mutation is in a region encoding the genetically modified matrix protein comprises a mutation in an N-terminal region portion of said matrix protein.

APPLICANT(S): WHITT, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 13

59. (Currently amended) The recombinant Rhabdovirus of claim 73 ~~claim 58~~, wherein said deletion or mutation is in the region encoding in said N-terminal region of said matrix protein is part of a nuclear localization sequence (NLS).
60. (Original) The recombinant Rhabdovirus of claim 45, further comprising a regulatory element.
61. (Cancelled)
62. (Currently amended) A vaccine comprising the The recombinant Rhabdovirus of claim 45, ~~said recombinant Rhabdovirus is being used as a vaccine.~~
63. (Currently amended) The recombinant Rhabdovirus of claim 56 ~~claim 45~~, wherein said Rhabdovirus genome is a vesicular stomatitis virus (VSV) genome.
64. (Withdrawn and currently amended) A method of producing a recombinant Rhabdovirus comprising a genetically modified nucleic acid encoding Rhabdovirus proteins including a deletion or a mutation within a ~~the~~ membrane-proximal ectodomain of a glycoprotein (G) comprising the steps of: (A) inserting into a suitable cell a polynucleotide sequence encoding Rhabdovirus proteins including a deletion or a mutation within the membrane-proximal ectodomain of the glycoprotein (G), a polynucleotide sequence encoding a marker polypeptide and a polycistronic cDNA comprising at least the 3' and 5' Rhabdovirus leader and trailer regions containing the cis acting signals for Rhabdovirus replication; (B) culturing

APPLICANT(S): WIIITI, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 14

the cell under conditions that permit production of the recombinant Rhabdovirus, and (C) isolating said recombinant Rhabdovirus.

65. (Withdrawn) The method of claim 64, further comprising the step of inserting a heterologous nucleic acid sequence encoding a second polypeptide into said cell.

66. (Withdrawn) The method of claim 64, wherein said second polypeptide is a therapeutic polypeptide.

67. (Withdrawn) The method of 64, wherein said second polypeptide is immunogenic.

68. (Withdrawn) The method of claim 64, further comprising the step of isolating genomic RNA from said isolated non-cytopathic recombinant Rhabdovirus.

69. (Withdrawn) The method of claim 68, wherein said step of isolating genomic RNA is performed by using RT-PCR.

70. (Withdrawn) The method of claim 64, wherein said suitable cell, being selected from the group consisting of rodent, primate and human cells.

71. (Withdrawn and currently amended) The method of claim 64, wherein said mutation of a the membrane-proximal ectodomain of the glycoprotein (G) encodes for the substitution of:

- (a) An alanine amino acid residue for a tryptophan amino acid residue;
- (b) An alanine amino acid residue for a glutamic acid, glycine and/or phenylalanine amino acid residue; or

APPLICANT(S): WILITI, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 15

- (c) Aspartic acid and alanine amino acid residues for a glutamic acid, glycine or phenylalanine amino acid residue, or combinations thereof; or
- (d) Any combination of the substitutions in (a)-(c).

72. (Withdrawn and currently amended) The method of claim 64, wherein said mutation is a deletion of the comprises:

- (a) nucleotides encoding for the amino acid residues 449-461, or a fragment thereof of the membrane-proximal ectodomain of the Rhabdoviral glycoprotein; or
- (b) nucleotides encoding for the amino acid residues 440-449 of the membrane-proximal ectodomain of the Rhabdoviral glycoprotein, or a fragment thereof.

73. (Withdrawn) The method of claim 64, wherein said mutation is an insertion of the nucleotides encoding for the amino acid residues 311-319 of decay acceleration factor (DAF) inserted between serine amino acid residues of the Rhabdoviral glycoprotein membrane proximal ectodomain.

74. (Withdrawn) The method of claim 64, wherein the non-cytopathic recombinant Rhabdovirus is a vesicular stomatitis virus (VSV).

75. (Currently amended) An isolated nucleic acid molecule comprising a polynucleotide sequence encoding a genome of a Rhabdovirus, said polynucleotide sequence having a deletion or a mutation in a gene

APPLICANT(S): WHITT, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 16

polynucleotide encoding a the membrane-proximal ectodomain of the glycoprotein (G).

76. (Withdrawn and currently amended) The isolated nucleic acid molecule of claim 75, wherein said mutation of a the membrane-proximal ectodomain of the glycoprotein (G), comprises substitution of:

- (a) An alanine amino acid residue for a tryptophan amino acid residue.
- (b) An alanine amino acid residue for a glutamic acid, glycine and/or phenylalanine amino acid residue; or
- (c) Aspartic acid and alanine amino acid residues for a glutamic acid, glycine or phenylalanine amino acid residue, or combinations thereof; or
- (d) Any combination of the substitutions in (a)-(c).

77. (Currently amended) The isolated nucleic acid molecule of claim 75, wherein said mutation is a deletion comprises of the:

- (a) nucleotides encoding for the amino acid residues 449-461 of the membrane-proximal ectodomain of the Rhabdoviral glycoprotein, or a fragment thereof; or
- (b) nucleotides encoding for the amino acid residues 440-449 of the membrane-proximal ectodomain of the Rhabdoviral glycoprotein, or a fragment thereof.

78. (Withdrawn) The isolated nucleic acid molecule of claim 75, wherein said mutation is an insertion of the nucleotides encoding for the amino acid

APPLICANT(S): WHITT, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 17

residues 311-319 of decay acceleration factor (DAF) inserted between serine amino acid residues of the Rhabdoviral glycoprotein membrane proximal ectodomain.

79. (Currently amended) The isolated nucleic acid molecule of claim 75, wherein said genome of a non-cytopathic Rhabdovirus further comprises a genetically modified deletion or a mutation within a region encoding a matrix (M) protein-(M), wherein said M protein deletion or mutation results in a non-cytopathic Rhabdovirus.
80. (Currently amended) The isolated nucleic acid molecule of ~~claim 75~~ claim 79, wherein said deletion or mutation is in a region encoding the N-terminus terminal portion of said matrix protein.
81. (Original) The isolated nucleic acid molecule of claim 80, wherein said deletion or mutation is in a region encoding a nuclear localization sequence (NLS).
82. (Currently amended) The isolated nucleic acid molecule of ~~claim 75~~ claim 81, wherein said mutation encodes for the substitution of:
- (a) An alanine amino acid residue for a methionine amino acid residue, at position 33 or 51 of the Rhabdovirus matrix protein; or
  - (b) A glycine amino acid residue for a serine amino acid residue, at position 226 of the Rhabdovirus matrix protein.
83. (Original) The isolated nucleic acid molecule of claim 75, further comprising a regulatory element.

APPLICANT(S): WHITT, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 18

84. (Currently amended) The isolated nucleic acid molecule of claim 75, further comprising an insertion of a heterologous nucleic acid sequence encoding a ~~second~~ polypeptide.
85. (Currently amended) The isolated nucleic acid molecule of claim 84, wherein said ~~second~~ polypeptide is a therapeutic polypeptide or is immunogenic.
86. (Withdrawn) The isolated nucleic acid molecule of claim 75, further comprising an insertion of a heterologous nucleic acid sequence encoding a marker polypeptide.
87. (Withdrawn) The isolated nucleic acid molecule of claim 86, wherein said marker polypeptide is green fluorescent protein, secreted alkaline phosphatase, DS-Red fluorescent protein, beta-galactosidase, or luciferase.
88. (Withdrawn) The isolated nucleic acid molecule of claim 75, further comprising an insertion of a nucleic acid sequence encoding a suicide gene.
89. (Currently amended) The isolated nucleic acid molecule of claim 75, further comprising an insertion of a nucleic acid sequence encoding a fusion facilitating polypeptide or an antireceptor.
90. (Currently amended) The isolated nucleic acid molecule of claim 75, wherein said Rhabdoviral genome is a vesicular stomatitis virus (VSV) genome.
91. (Original) A vector comprising the isolated nucleic acid molecule of claim 75.
92. (Withdrawn and currently amended) A method for treating a subject suffering from a disease associated with a defective gene comprising the step of

APPLICANT(S): WHIT, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 19

administering to a target cell of said subject a therapeutically effective amount of a recombinant non-cytopathic Rhabdovirus, wherein the genome of said Rhabdovirus includes a deletion or a mutation within a region encoding a matrix protein (M) and/or a -and-a heterologous gene capable of being expressed inside the target cell, thereby treating the disease.

93. (Withdrawn) The method of claim 92, whrcin said target cell is an epithelial cell, a lung cell, a kidney cell, a liver cell, an astrocyte, an immune cell, a glial cell, a prostate cell, or alpha, beta or delta cells of pancreatic islet, or acinar cells.

94. (Withdrawn and currently amnded) A method for immunizing a subject against a disease comprising the step of contacting a target cell of said subject with a therapeutically effective amount of a recombinant virus, whrcin the virus comprises a Rhabdoviral genome, or fragment thereof, said Rhabdoviral genome or fragment thereof including a deletion or a mutation within a region encoding a matrix (M) protein-(M), and/or a deletion or a mutation within a region encoding the membrane-proximal ectodomain of a glycoprotein (G protein) and a heterologous gene encoding an immunogenic protein, or peptide fragment, capable of being expressed inside the target cell, thereby immunizing against a disease.

95. (Withdrawn) The method of claim 94, whrcin said target cell is an epithelial cell, a lung cell, a kidney cell, a liver cell, an astrocyte, a glial cell, a prostate cell, a professional antigen presenting cell, a lymphocyte or an M cell.

APPLICANT(S): WHITT, Michael A. *et al.*

SERIAL NO.: 10/656,894

FILED: September 8, 2003

Page 20

96. (Withdrawn and currently amended) A method for treating a subject suffering from a disease comprising the step of contacting a target cell of said subject with a therapeutically effective amount of a recombinant virus, wherein the virus comprises a Rhabdoviral genome, or fragment thereof, said Rhabdoviral genome or fragment thereof including a deletion or a mutation within a region encoding a matrix (M) protein-(M) and/or a deletion or a mutation within a region encoding the membrane-proximal ectodomain of a glycoprotein (G protein) and a heterologous gene encoding an immunogenic protein or peptide fragment, capable of being expressed inside the target cell, thereby treating a disease.

97. (Withdrawn) The method of claim 96, wherein said target cell is an epithelial cell, a lung cell, a kidney cell, a liver cell, an astrocyte, a glial cell, a prostate cell, a professional antigen presenting cell, a lymphocyte or an M cell.

98. (Withdrawn and currently amended) A method for treating a subject suffering from a disease associated with a defective gene comprising the step of contacting a target cell of said subject with a therapeutically effective amount of a recombinant virus, wherein the virus comprises a Rhabdoviral genome, or fragment thereof, said Rhabdoviral genome or fragment thereof including a deletion or a mutation within a region encoding a matrix (M) protein-(M) and/or a deletion or a mutation within a region encoding the membrane-proximal ectodomain of a glycoprotein (G protein) and a heterologous gene capable of being expressed inside the target cell, thereby treating the disease.

APPLICANT(S): WHITT, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 21

99. (Withdrawn) The method of claim 98, wherein said target cell is an epithelial cell, a lung cell, a kidney cell, a liver cell, an astrocyte, a glial cell or a prostate cell.

100. (Withdrawn and currently amended) A method for cancer cell lysis, comprising the steps of contacting a cancerous cell with a recombinant Rhabdovirus, wherein said Rhabdovirus comprises (a) a nucleic acid comprising a Rhabdoviral genome, or fragment thereof, wherein said Rhabdoviral genome or fragment thereof comprises a deletion or a mutation within a region encoding a matrix (M) protein (M) and/or a deletion or a mutation within a region encoding the membrane-proximal ectodomain of a Rhabdoviral glycoprotein (G\_protein); and (b) a non-Rhabdoviral nucleic acid.

101. (Withdrawn) The method of claim 100, wherein said non-Rhabdoviral nucleic acid encodes for a cytokine or suicide gene.

102. (Withdrawn and currently amended) A method for treating cancer, comprising the steps of contacting a cancerous cell with a recombinant virus, wherein said virus comprises (a) a nucleic acid comprising a Rhabdoviral genome, or fragment thereof, said Rhabdoviral genome or fragment thereof comprises a deletion or a mutation within a region encoding a matrix (M) protein-(M) and/or a deletion or a mutation within a region encoding the membrane-proximal ectodomain of a glycoprotein (G\_protein); and (b) a non-Rhabdoviral nucleic acid.

APPLICANT(S): WHITT, Michael A. *et al.*  
SERIAL NO.: 10/656,894  
FILED: September 8, 2003  
Page 22

103. (Withdrawn) The method of claim 102, wherein said non-Rhabdoviral nucleic acid encodes for a cytokine or suicide gene.
104. (Withdrawn) A method for identifying an agent that has oncolytic activity, comprising the steps of: obtaining vibrotome slices of corona, substantia nigra and cortex tissue, culturing said slices on coverslips under conditions maintaining viability and inhibiting mitosis, inoculating said slice culture with labeled cancer cells, culturing said inoculated culture with a candidate agent, and determining cancer cell viability, wherein a decrease in cancer cell viability indicates that the candidate agent is oncolytic, thereby identifying an agent that has oncolytic activity.
105. (Withdrawn) The method of claim 104, wherein said cancerous cells are of neuronal origin.
106. (Withdrawn) The method of claim 105, wherein said neuronal origin cancerous cells are glioma cells.
107. (Withdrawn) The method of claim 104, wherein said cancerous cells are labeled with a fluorescent, luminescent, chromogenic or electron dense label.
108. (Withdrawn) The method of claim 104, further comprising the step of inoculating said slice culture with labeled recombinant Rhabdovirus.
109. (Withdrawn) The method of claim 104, further comprising the step of culturing said inoculated slice culture with a cytokine.
110. (Withdrawn) The method of claim 109, wherein said cytokine is an interferon.

APPLICANT(S): WIIITI, Michael A. *et al.*

SERIAL NO.: 10/656,894

FILED: September 8, 2003

Page 23

111. (Withdrawn) The method of claim 104, wherein culturing said slices on coverslips under conditions maintaining viability is in a medium comprising Gey's/dextrose solution, plasma, thrombin, Eagle's basal medium, Hanks' balanced salt solution, L-glutamine, or any combination thereof.

112. (Withdrawn) The method of claim 104, wherein culturing said slices on coverslips under conditions inhibiting mitosis is in a medium comprising cytosine- $\alpha$ -D-arabinofuranoside, uridine, 5-fluro-2'-deoxyuridine, Gey's/dextrose solution, plasma, thrombin, Eagle's basal medium, Hanks' balanced salt solution, L-glutamine or any combination thereof.